

Notice of Allowability

Application No.

10/045,459

Examiner

Tuyen Q. Tra

Applicant(s)

BRUNS, DONALD

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/10/2006.
2. ☒ The allowed claim(s) is/are 11-21 and 28-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 0802
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 05/31/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with John Ross on May 31, 2006.
3. The application's claim has been amended as follows:
 - Claim 1-10, 22-27 and 35 are canceled.

Reason For Allowance

4. Claims 11-21 and 28-34 are allowed.
5. Following is an examiner's statement of reasons for allowance:

The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claim(s), in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 11, 16, 28 and 30, which include (claim 11) method for directing an optical control beam onto the optical sensor, wherein the optical sensor determines optical characteristics of the optical control beam; responsively supplying voltage to the rotatable mirror, wherein an amount of the supplied voltage is based on the determined optical characteristics of the optical control beam; and rotating the rotatable mirror about a primary axis in response to the supplied

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voltage to the rotatable mirror; (claim 16) step for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; responsively supplying voltage to a rotatable mirror that is associated with the first and second optical sensors, wherein an amount of the supplied voltage is based on the respectively determined optical characteristics of the first and second optical control beams; and rotating the rotatable mirror that is associated with the first and second optical sensors about a primary and secondary axes in response to voltage respectively supplied by the first and second optical sensors; (claim 28) an optical controller for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; and a voltage controller that is configured with the optical sensor, wherein the voltage controller responsively supplies voltage to the rotatable mirror based on the respectively determined optical characteristics of the first and second optical control beams, causing the rotatable mirror to rotate about the primary and secondary axes; (claim 30) an optical controller for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; and a separate voltage controller that is configured with each of the plurality of associated optical sensors, wherein the separate voltage controller responsively supplies voltage to an associated rotatable mirror based on the

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respectively determined optical characteristics of the first and second optical control beams, causing the rotatable mirror to rotate about the primary and secondary axes.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bowers et al. (US Patent 6,643,425 B1) discloses a switch having switch mirror arrays controlled by scanning beams with teaching of a scanning control beam used to scan across the control elements (202), which provides selectively drive voltage for electrodes (202), based on a received scanning control beam, via connection (210) in creating electrostatic actuation to move gimbaled mirror (206); however, Bowers et al. does not teach or fairly suggest an optical controller for directing first and second optical control beams onto respective first and second optical sensors, wherein the first and second optical sensors respectively determine optical characteristics of the first and second optical control beams; and a voltage controller that is configured with the optical sensor, wherein the voltage controller responsively supplies voltage to the rotatable mirror based on the respectively determined optical characteristics of the first and second optical control beams, causing the rotatable mirror to rotate about the primary and secondary axes.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L Mack, can be reached on (571) 272 - 2333. The fax number for this Group is (571) 273-8300.

TT

May 31, 2006


Hung Xuan Dang
Primary Examiner